

REMARKS

Independent Claim 6 is amended to emphasize a distinction over the principal reference. The lands of two tracking areas are wobbled. This configuration, used in a judging area, allows the recording medium of the present invention to associate reliably, and in real time, a given track area with a given wobble polarity.

Independent Claim 9 is added to emphasize that a groove associated with first and second track areas is wobbled to provide a wobble polarity. Support for this claim appears at least at page 47, lines 12 to 18.

Dependent Claims 7 and 8 are amended to depend multiply from either claim 6 or 9.

Applicants respectfully traverse the rejection of claims 6-8 under 35 USC 102(e) as anticipated by Ogata et al., U.S. Patent No. 5,940,364. Ogata et al. discloses a recording medium with lands 20 and grooves 19. A land and adjacent groove share a wobbling side wall, e.g. 8a in Fig. 15b. The other groove side wall 8b is not wobbled. In the Ogata et al. reference, only reproduce-only, pit-encoded information is in grooves 19. The intervening lands 20 are used only for data-recording. The present invention is not restricted to this construction or mode of use. The claimed recording medium uses a wobble polarity to determine a track area for use. As discussed in more detail below, the prior art does not develop or use a wobble polarity in this manner.

In all embodiments of the present invention, a single beam spot (MB1 or MB2 in the Figures) produces, via a multi-part photodetector 60, first and second wobble signals that are in or out of phase, as shown by Figs. 7b and 7c versus 7d and 7e and Figs. 9(b) and 9(c) versus Figures 9(d) and 9(e). These phase differences (wobble polarity),

produced by the claimed recording medium construction, provide the claimed correspondence of the wobbling polarity with one track area.

The Examiner cites Col. 21, lines 30-26 of the Ogata et al. references as describing "a polarity reversing circuit 71", working in conjunction with a wobble signal S66 that is converted into a bi-phase digital signal S75a which in turn is converted into an address signal S77 input to the controller 78. The controller controls "the positions of the light spots on optical disk 1".

This system thus uses wobbling information to control the portion of the scan on the disk, but it does not disclose the arrangement of the present invention in which the judgment as to which one of the outer radius and the inner radius of the track is being wobbled. In the present invention, a wobbling polarity judgment is conducted by comparing the phase of the first wobble signal and that of the second wobble signal.

Moreover, Ogata et al. is cited as teaching lead-in and lead-out areas argued as teaching applicant's "adjusting area". The Examiner cites column 15, lines 59 to 67 as describing that "in the lead-in area 211, data as to control information, such as address management information ... are recorded, in the form of pits or wobbles. In the lead-out area 211, data indicating the end of the track are recorded, in the form of pits or wobbles." Thus, Ogata et al. discloses these areas for carrying recorded information in a tracking area. It does not disclose the claimed adjusting area that shows the correspondence between the wobbling polarity and the track area (by comparing the phase of the first wobbling signal and that of the second wobbling signal). The lead-in area 211 and the lead-out area 212 of Ogata et al. therefore do not correspond to, teach, or suggest the "adjusting area" as claimed herein.

Moreover, the present invention is so arranged that the first track area is the land L1 whose inner side wall is wobbled, and the second track area is the land L2 whose outer side wall is wobbled. (See the specification, page 36, line 24, to page 37, line 4, and Figure 7(a).)

In contrast, Ogata et al. is so arranged that the wobble signal is formed by the pit arrays in the inner track area 201 and the wobble is formed by the continuous grooves in the outer track area 202 (see Column 14, lines 5 to 9; Figure 14).

Moreover, contrary to the Examiner's view, Ogata et al. in Column 14, lines 44 to 54, does not describe the arrangement in which the side walls on the other side wall at a non-wobbled side in the other track is wobbled. Rather, the Ogata et al. arrangement is one in which the side wall at the wobble side in the other track is wobbled.

Further, Ogata et al. is so arranged that the inner track area 201 and the outer track area 202 have the guiding groove (groove) 3 and the guide groove spaces (land) 4, whereas the present invention is so arranged that the first track area and the second track area both have the lands (L1 and L2).

Note that in the present invention the wobbling polarity makes the difference between the in-phase and the opposite phase only between the lands or between the groove, as a result of the phase comparison between the first wobbling signal detected from the difference signal and the second wobbling signal detected from the sum signal.

In cases of the lands and grooves of Ogata et al., the difference in the wobbling polarity is cancelled out by the difference in the tracking polarity between the lands and grooves. Thus, the phase relationship is the in-phase or the opposite phase fixedly. Therefore, in Ogata et al., it is impossible to detect the difference in the wobbling polarity, unlike the present invention.

In view of the foregoing amendments and remarks, applicant urges that the pending claims patentably distinguish over the art of record and that the application is otherwise in condition for allowance.

Respectfully submitted,



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